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Suppliers' Information Note

For The BT Network

BT National MegaStream® 45

Service Description

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1. Introduction

This Suppliers' Information Note (SIN) describes the BT National MegaStream®45 Service and provides technical information for terminal equipment (TE) manufacturers and suppliers.

2. Service Availability

The BT National MegaStream®45 service covers (where capacity exists) mainland Britain and Northern Ireland (The UK licence area).

Note: The MegaStream 45 service and any associated variants and product features were withdrawn from new supply in November 2021. BT will continue to support remaining services until 30th November 2025 after which the MegaStream 45 service, and any associated variants, product features or options, including the aggregate service, will be fully withdrawn.

3. Service Outline

The BT National MegaStream®45 is an inland unstructured point to point leased high speed digital service operating at 44.736Mbit/s. The Service is presented to the customer via an ITU-T Recommendation G.703[1] interface using the Bipolar with Three-Zero Substitution (B3ZS) line code.

Note. The Open Network Provision (ONP) Services do not currently include the rate of 44.736 Mbit/s.

4. Technical Specification

4.1 Physical

The physical presentation of the services is via a pair of BNC unbalanced 75 Ohm sockets, one for each direction of transmission. The sockets conform to the general requirements of IEC 169-8[2] with the mating dimensions specified in annex B of BS ISO/IEC 10173 : 1991[3].

The digital distribution frame (DDF) mentioned in clause 5 of G.703[1] is not included in the network terminating equipment (NTE). The DDF allowance of 0.6dB can be used by the customers equipment and cabling, however, BT would advise that this allowance is reserved for losses in the connectors.

4.2 Electrical

Electrically, the presentation conforms to clause 5 of G.703[1]. The line code is B3ZS as defined in G.703[1] Annex A.

4.3 Frame Structure

The service is unstructured, i.e. there are no constraints on the use or format of the bit pattern/frame structure other than those of the line code.

4.4 Timing

The service will support customers transmit signal timing within the limits of 44 736 kbit/s ± 20 ppm which is in accordance with subclause 5.2 of G.703[1].

4.5 Jitter

4.5.1 From the Terminal to the Network

The BT network will accept jitter in accordance with ITU-T Recommendation G.824[4].

4.5.2 From the Network to the Terminal

The level of Jitter from the network to the terminal will be in accordance with ITU-T Recommendation G.824[4].

4.6 Network Terminating Equipment (NTE) Power

The NTE is locally powered and will require a local mains 50 Hz AC supply. It will be mounted in accordance with standard BT practices in agreement with the customer.

Where the NTE is powered by a customer provided -50Volts, the NTE will be supplied with a connection lead which will be presented as wires only. As power supplies can vary slightly in output voltage and characteristics, the NTE will function with customer provided power supplies which are in accordance with the British Telecom Network Requirement, (BTNR) 2511[5].

Note. Customer provided power supplies for connection to this service shall conform with relevant safety standards.

5. Service Maintenance

There are no mandatory maintenance facilities associated with this service.

6. Contact Information

For information about this service please telephone:

- Your Company's BT account manager
- For business customers, BT sales on 0800 800152 for product and service information, sales and rental enquiries.

If you have enquiries relating to this document please contact us at: sinet.helpdesk@bt.com

7. References

ITU-T / CCITT Recommendation:

[1]	G.703	Physical/Electrical characteristics of hierarchical digital interfaces.	1991
[4]	G.824	The control of jitter and wander within digital networks which are based on the 1544 kbit/s hierarchy.	1993

British Standards:

[2]	IEC 169-8	Radio-frequency connectors - Part 8 : R.F. coaxial connectors with inner diameter of outer conductor 6.5 mm (0.256 in) with bayonet lock - Characteristic impedance 50 ohms (Type BNC).	1978
[3]	BS ISO/IEC 10173	Integrated Services Digital Network (ISDN) Primary Access Connector at Reference Points S and T.	1991

British Telecommunications Network Requirements (BTNR):

[5]	BTNR 2511	Interface of telecomms equipment with a nominal 48v negative dc power supply.	Latest Issue

8. Abbreviations

B3ZS	Bipolar with three-zero substitution
BTNR	British Telecom Network Requirement
DDF	Digital distribution frame
ITU-T	International Telecommunications Union For Telecommunications (formerly CCITT)
NTE	Network Terminating Equipment
ONP	Open Network Provision
SIN	Suppliers' Information Note
TE	Terminal Equipment

9. History

Issue 1.0	Oct 1997	First Issued.
Issue 1.1	Feb 2001	Editorial changes.
Issue 1.2	May 2003	Approval Requirements statement removed, information available via SINet Useful Contacts page. Reference numbering amended.
Issue 1.3	February 2016	Change SINet site references from http://www.sinet.bt.com to http://www.btplc.com/sinet/
Issue 1.4	July 2020	Notification of service withdrawal timeframes added. Change SINet site references from http://www.btplc.com/sinet/ to https://www.bt.com/about/sinet
Issue 1.5	July 2021	Stop Sell New date updated
Issue 1.6	September 2022	Confirmation of full service withdrawal date.

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